What is claimed is:

1. In a system for processing document images, a method for antialiasing at least one input image to provide an antialiased image, comprising the steps of:

receiving the input image;

processing said received input image by operation of an antialiasing filter to create an antialiased image, the antialiasing filter operation including the steps of:

(1) determining one or more regions within the received image,

(2) upon detecting at least one region containing a background image level that adjoins an image object having pixel values in a range other than a predetermined range of limit values, setting the pixel values of edge pixels in the image object to be substantially the same value; and

outputting the antialiased image.

2. The method of **claim 1**, wherein the received image further comprises a digital image and the operation of the antialiasing filter further comprises determining a region of the digital image by extracting an observation window of neighboring pixels at a target location.

3. The method of **claim 2**, wherein the received digital image further comprises super resolution pixels.

4. The method of **claim 3**, wherein the antialiasing filter operation further comprises operation of an order-statistic filter applied to the super resolution pixels within the observation window.

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5. The method of **claim 3**, wherein the operation of the antialiasing filter further comprises the steps of forming an address based on counting similar values within the observation window, and employing the address for indexing a table of values to determine the pixel values of the edge pixels.

6. The method of **claim 2**, wherein the pixel resolution of the received image is at or above a value that is an integer multiple of the pixel resolution of the antialiased image.

7. The method of **claim 2**, wherein the operation of the antialiasing filter further comprises the steps of receiving a tag identifying one or more pixels in the input image, the one or more identified pixels being selected for processing by the antialiasing filter, and in response processing the one or more identified pixels.

8. The method of **claim 1**, wherein the received image is provided in the form of a page description language.

9. The method of **claim 8**, wherein the operation of the antialiasing filter further comprises the steps of setting the gray values of the edges of the image object by inserting a page description language object into the output antialiased image, the inserted page description language object having predetermined pixel values.

10. In a system for processing document images, a method for antialiasing at least one input image to provide an antialiased image, comprising the steps of:

receiving the input image;

processing said received input image by operation of an antialiasing filter to create an antialiased image, the antialiasing filter operation including the steps of:

(1) selecting at least one of a logical filter operation and an averaging filter operation, said selection being determined according the pixel level of selected pixels in an image object present in the received input image, and

(2) applying the selected filter operation to the image object to produce the antialiased image, wherein the image object in the antialiased image exhibits edge pixel values that are substantially uniform around the image object; and

outputting the antialiased image.

11. The method of **claim 10**, wherein the received input image further comprises a digital image and the operation of the antialiasing filter further comprises determining a region of the digital image by extracting an observation window of neighboring pixels at a target location.

12. The method of **claim 11**, wherein the received digital image further comprises super resolution pixels.

13. The method of **claim 12**, wherein the selection of logical filter operation and averaging filter operation further comprises the step of examining pixel values within an observation window.

14.   The method of **claim 13**, wherein the operation of the antialiasing filter further comprises the step of application of an order-statistic filter to the super resolution pixels within the observation window, wherein an order-statistic result is used to set the edge values of the image object.

15.   The method of **claim 13**, wherein the operation of the antialiasing filter further comprises the steps of forming an address based on counting similar values within the observation window, and using the address for indexing a table of values to set the edge values of the image object.

16.   The method of **claim 10**, wherein the received input image is provided in the form of a page description language.

17. In a system for processing document images, apparatus for antialiasing at least one input image to provide an antialiased image, comprising   an image processing unit operable for receiving the input image and for processing said received input image by operation of an antialiasing filter to create an antialiased image, the antialiasing filter being operable to:

(1) determine one or more regions within the received image;

(2) detect a region containing a background image level that adjoins an image object having pixel values in a range other than a predetermined range of limit values;

(3) set the pixel values of edge pixels of the image object to be substantially the same value; and

(4) output the antialiased image.

18. In a system for processing document images, apparatus for antialiasing at least one input image to provide an antialiased image, comprising   an image processing unit operable for receiving the input image and for processing said received input image by operation of an antialiasing filter to create an antialiased image, the antialiasing filter being operable to:

(1) select at least one of a logical filter operation and an averaging filter operation, said selection being determined according the pixel level of one or more pixels in an image object present in the received input image;

(2) apply the selected filter operation to the image object to produce the antialiased image, whereby the image object in the antialiased image exhibits edge pixel values that are substantially uniform around the image object; and

(3) output the antialiased image.